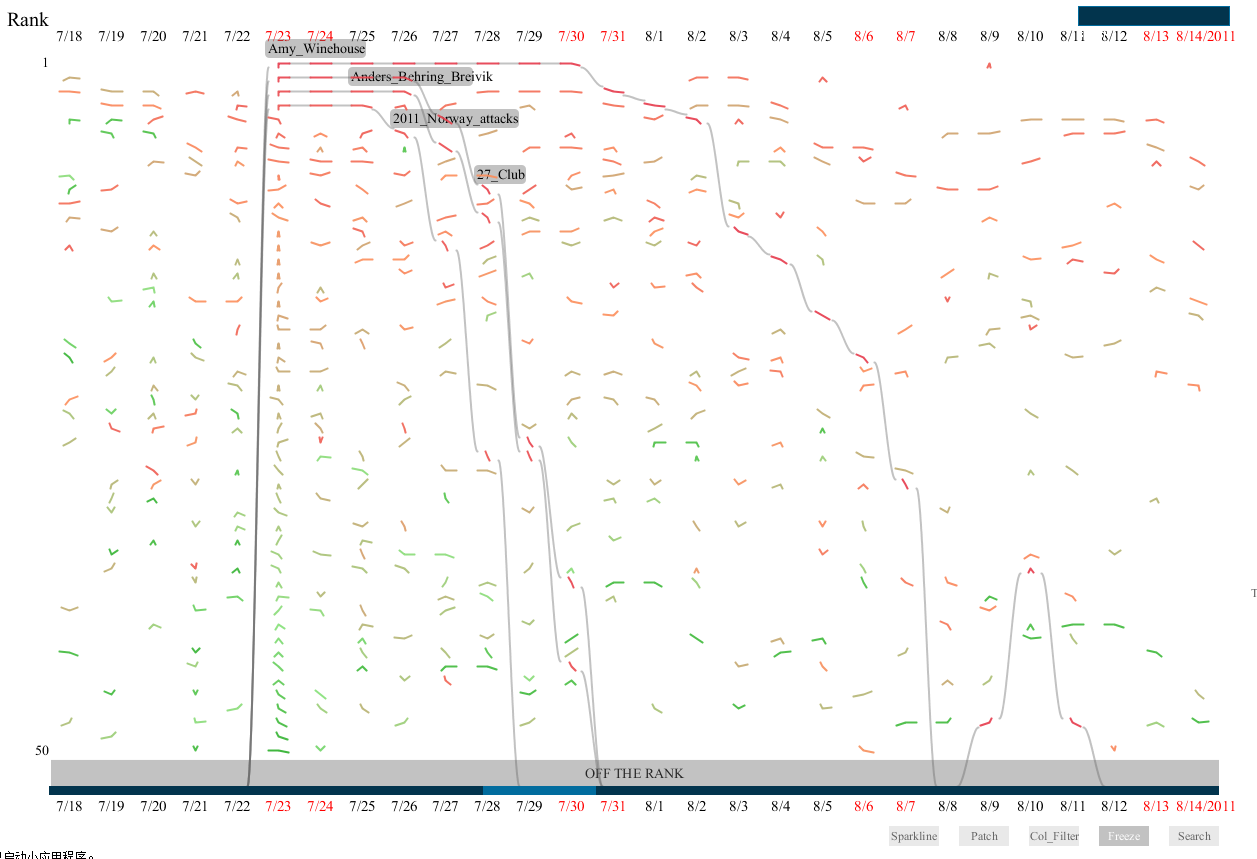
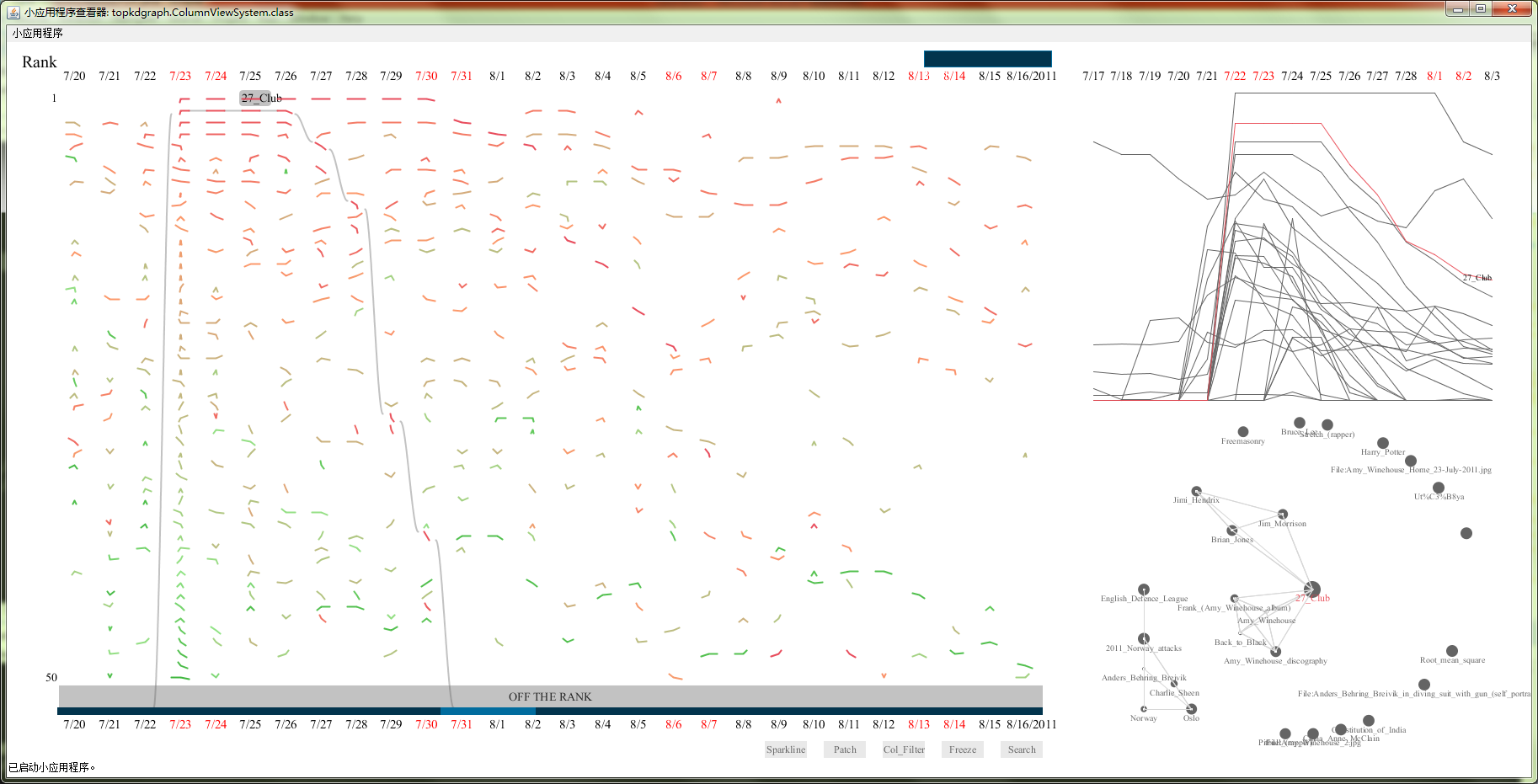
The first case demonstrate the usefulness of WikiRankVis on spotting unusual events, especially on spotting and accurately recognizing distinct concurrent events which share similar ranking trends.



As shown in Fig.1, on July 23th, 2011, four surging items: Amy, 27 Club, Anders and 2011 Norway Attack suddenly showed up to the top of the rank simultaneously. They stayed top for several days, then went down rapidly and fell of the top 50 rank list. Since mostly, such an unusual changing pattern shared by 4 items may indicate unusual events, we clicked one of the items: 27 Club for further exploration.



a

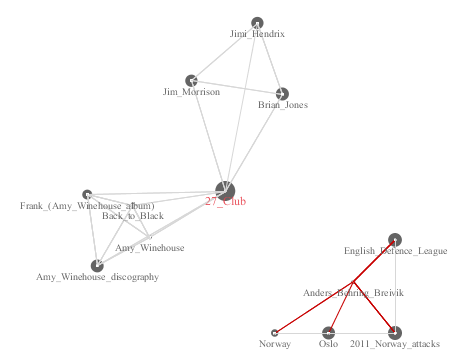
b

Fig.2 shows the results after 27 Club is clicked. (a) is the rank curve view of items sharing similar page view changing pattern with 27 Club, while (b) shows the network constructed by the similar items based on similarity and page-link information. (The size of each node demonstrates the similarity shared with the central node. The arc between two nodes depicts the existence of page-link relationship between the specific items represented by the two nodes.)

We could find it in (a) that most of the similar items computed by WikiRankVis shared a similar changing pattern. They suddenly surged on a specific day, stayed for several days and then went down. Hence, our system is wise in similarity computation and the curve view does make sense in showing the changing pattern.

Then, we refer to page-link network view (b) for more information. Two independent network N1, N2 are shown in the view. Amy and 27 Club are in N1, while 2011Norway Attack and Anders are in N2. N1 and N2 are independent from each other, which means that the 4 similar items may belong to distinct events.

For detailed exploration, we filtered out the nodes without page-link information and constructed the network only with the rest. Then we got the result shown in Fig3.



N11

N12

N2

N1 and N2 are obviously independent events, but they got high attention simultaneously. N1 is about Amy and 27 Club, and N2 is about Norway and Anders. N1 could be further partitioned into N11 and N12, which are independent from each other but share the similar relation with 27 Club.

Then, with the help of the Internet, we got to know that 27 Club is a team that refers to a number of rock/popular musicians who died at age 27. And the items in N12 are names of whom belonging to 27 Club. On July 23th 2011, Amy, the famous British rock musician, dead at her age of 27. (Event 1) So that’s why there was a network centered with 27 Club, consisting of a sub-network about Amy (N11) and N12 about other “27 Club members”.

As for N2, the online news engine told us that on July 23th 2011, a shooting accident conducted by Anders happened in Oslo, Norway, which is know as 2011 Norway Attack. (Event 2)

Thus, WikiRankVis could wisely spot events and efficiently help to recognize concurrent events based on multi-viewed analysis.